



## Analysis of Mental Toughness Between Taekwondo and Karate Players

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**Abstract:** *Background:* Taekwondo and Karate are two most popular Martial Art forms. Both require a strong mind and highest concentration to be able to perform and excel. Karate is perhaps more popular in the world given its prominence in Movies and other media; however, Taekwondo is an Olympic Sport. Hence both the sport has their own value. Since, both sports need their exponents to be strong mentally, it can be practiced by interested people who wish to develop their mental strength. Though both forms can be practiced as per the interest of the person who is practicing it, a question on which is better of the two for develop mental toughness does arise. Therefore, this study was initiated to compare and assess the mental toughness between Taekwondo and Karate players. *Method:* To achieve the purpose of the study the investigator selected 20 Taekwondo players from Taekwondo Martial Arts School [TMAS] and 20 Karate players from Shito-Ryo Do India of Pondicherry. Their age ranged from 12 to 18 years. Mental Toughness Questionnaire by Dr. Alan Goldberg was used to assess mental toughness. The questionnaire elicited the scores on Mental Toughness of each and every participant. The data was statistically analyzed by application of T Test. For the purpose of the study, the level of significant fixed was 0.05 for all the variables. *Findings:* The result of the study revealed that there was significant difference between Taekwondo and Karate players on Mental Toughness. Taekwondo players were found to be better than the Karate players in Mental toughness.

**Keywords:** Karate players, Martial arts, Mental toughness, , Olympic sport, Taekwondo players.

## INTRODUCTION

### Mental Toughness

Clough has described that “The mentally tough individual has a high sense of self-belief and an unshakeable faith that they control their own destiny.” Mental Toughness refers to an individual’s resilience and an inner drive to succeed - particularly in the moment of challenging. Mental toughness is undoubtedly an important ingredient of athletic success; basically, sportsmen with mental toughness have the ability to raise their game to the highest level at crucial moments in a match. Clough identified 4 key components of Mental Toughness: 1. Control 2. Challenge 3. Commitment 4. Tae-Kwon-Do which is a form of

Korean martial arts requires a competent level of mental toughness for a shorter period of time not only Tae-Kwon-Do, karate is a martial art developed in the Ryukyu Kingdom and it also need short period of time activity.

Mental toughness is a measure of individual spirit and confidence that may predict success in sport, education and the workplace. As a broad concept, it emerged in the situation of sports training, in the context of a set of attributes that allow a person to become a better athlete and able to cope difficult training and difficult competitive situations and emerge without losing confidence. In recent decades, the term has been commonly used by coaches, sport psychologists, sports commentators, and business leaders. “Mental toughness” is normally used colloquially to refer to any set of positive attributes that helps a person to cope with difficult situations. Coaches and sport commentators freely use the term mental toughness to describe the mental state of athletes who persevere through difficult sport conditions to succeed.

### **Tae-Kwon-Do**

The name Taekwondo is derived from the Korean word “Tae” meaning foot, “Kwon” meaning fist and “Do” meaning way of. So, literally Taekwondo means “the way of the foot and fist”. The name Taekwondo, however, has only been used since 1955 while the arts’ roots began 2,300 years ago in Korea. Known as a martial art and way of life, the evolution of Taekwondo was a direct result of the happenings in Korea long ago, and knowledge of the history is an important step in understanding Taekwondo.

### **Karate**

Karate began as a common fighting system known as te (Okinawan: ti) among the Pechin class of the Ryukyans. After trade relationships were established with the Ming dynasty of China in 1372 by King Satto of Chûzan, some forms of Chinese martial arts were introduced to the Ryukyu Islands by the visitors from China, particularly Fujian Province. A large group of Chinese families moved to Okinawa around 1392 for the purpose of cultural exchange, where they established the community of Kumemura and shared their knowledge of a wide variety of Chinese arts and sciences, including the Chinese martial arts. The political centralization of Okinawa by King Shô Hashi in 1429 and the policy of banning weapons by King Shô Shin in 1477, later enforced in Okinawa after the invasion by the Shimazu clan in 1609, are also factors that furthered the development of unarmed combat techniques in Okinawa.

## **METHODOLOGY**

For the study, 20 Taekwondo players from Taekwondo Martial Arts School [TMAS] and 20 Karate players from Shito-Ryo Do India of Pondicherry were selected. The age of the

participants ranged from 12 to 18 years. The subjects were selected on a random basis. The subjects were measured on the psychological variable such as Mental toughness. The collected questionnaires were converted into standard scores as described by the authors. The collected data were subjected to statistical treatment to find out any differences. In order to examine the hypothesis of the study, descriptive statistics such as mean standard deviation and comparative statistics such as independent sample “t” and analysis of variance were employed.

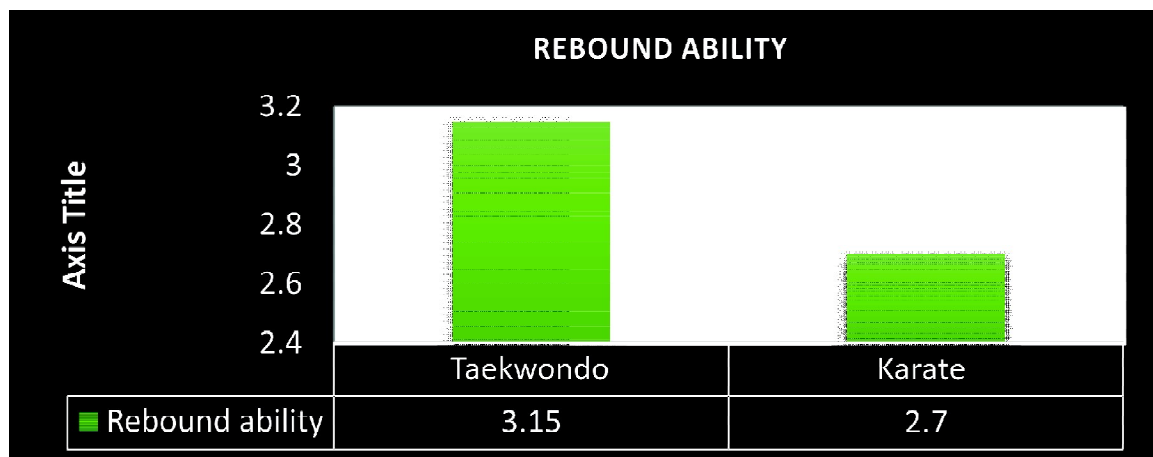
## RESULTS

**Table I**  
**Data and Test of Significance (T Test) for the Comparison of Taekwondo and Karate Players based Rebound ability**

Variables	Group	N	Mean	SD	Df	T
ReboundAbility	Taekwondo	20	3.15	1.90	38	1.16
	Karate	20	2.7	1.08		

From Table1 t test showed that there exists significant mean difference in the mental toughness of ( $t=1.16$ ). The inference is that **Rebound ability** scores of Taekwondo players (**mean=3.15, SD=1.90**) is higher than Karate players (**mean=2.7, SD=1.08**). When comparative calculated value **1.16** is lesser than the table value **2.021** since there was no significant difference between Taekwondo and Karate players in rebound ability. The comparative bar diagram of the Rebound ability level of Taekwondo and Karate players show in figure.

**Figure I: Bar Diagram Showing that the Rebound Ability of Taekwondo and Karate Players**

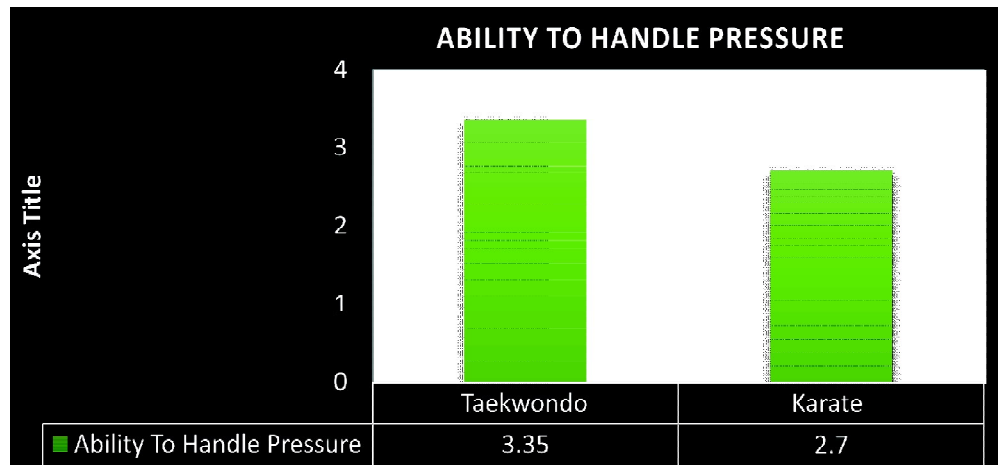


**Table II**  
**Data and Test of Significance (T Test) for the Comparison of Taekwondo and Karate Players based Ability to Handle Pressure**

<i>Variables</i>	<i>Group</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>Df</i>	<i>T</i>
Handle Pressure	Taekwondo	20	3.35	1.39	38	1.55
	Karate	20	2.7	2.11		

From Table 2 t test showed that there exists significant mean difference in the mental toughness of ( $t=1.55$ ). The inference is the **Ability to handle pressure** scores of Taekwondo players (**mean=3.35, SD=1.39**) is higher than the Karate players (**mean=2.7, SD=2.11**). When comparative calculated value **1.55** is lesser than the table value **2.021** since there was no significant difference between Taekwondo and Karate in Ability to handle pressure. The comparative bar diagram of the ability to handle pressure of Taekwondo and Karate players are shown in figure.

**Figure II: Bar Diagram Showing that the Ability to Handle Pressure of Taekwondo and Karate Players**



**Table III**  
**Data and Test of Significance (T Test) for the Comparison of Taekwondo and Karate Players based Concentration Ability**

<i>Variables</i>	<i>Group</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>Df</i>	<i>T</i>
Concentration Ability	Taekwondo	20	4.65	2.13	38	2.83*
	Karate	20	3.2	3.11		

From Table 3 t test showed that there exists significant mean difference in the mental toughness of ( $t=2.83^*$ ). The inference is that **Concentration ability** scores of Taekwondo players (**mean=4.65, SD=2.13**) is higher than the karate players (**mean=3.2, SD=3.11**). When comparative calculated value **2.83\*** is greater than the table value **2.021** there was significant change between Taekwondo and Karate players in concentration ability. The comparative bar diagram of the concentration ability of Taekwondo and Karate players are shown in figure.

Figure III: Bar Diagram Showing that the Concentration Ability Level of Taekwondo and Karate Players

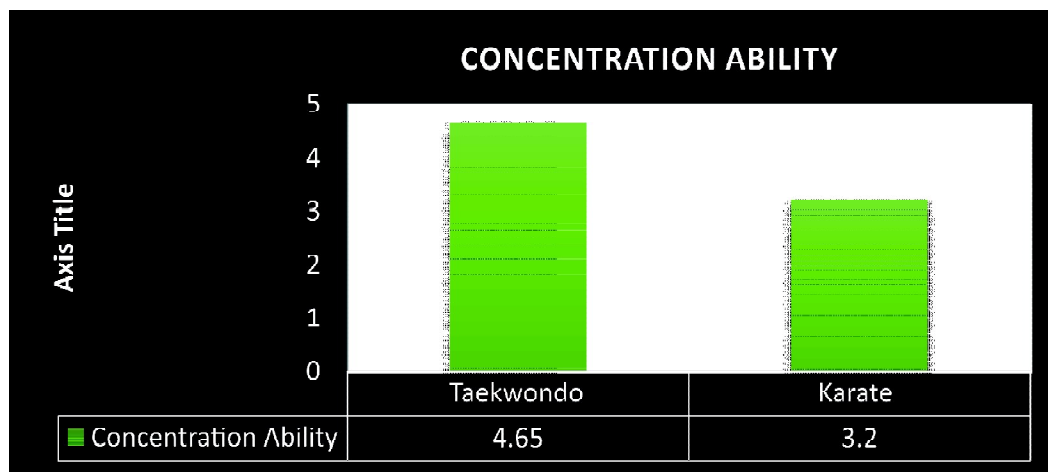


Table IV  
Data and Test of Significance (T Test) for the Comparison of Taekwondo and Karate Players based Level of Confidence

Variables	Group	N	Mean	SD	Df	T
Confidence	Taekwondo	20	4.1	1.25	38	1.16
	Karate	20	3.65	1.71		

From Table 4 t test showed that there exists significant mean difference in the mental toughness of ( $t=1.16$ ). The inference is that **Level of confidence** score of Taekwondo players (**mean=4.1, SD=1.25**) is higher than Karate players (**mean=3.65, SD=1.71**). When comparative calculated value **1.6** is lesser than the table value **2.021** since there was no significant difference between Taekwondo and Karate players in confidence. The comparative bar diagram of the confidence level of Taekwondo and Karate players are shown in figure.

Figure IV: Bar Diagram Showing that the Confidence Level of Taekwondo and Karate Players

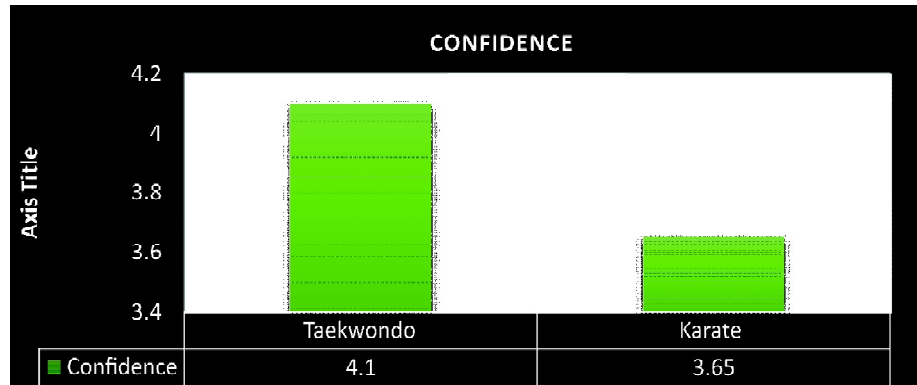
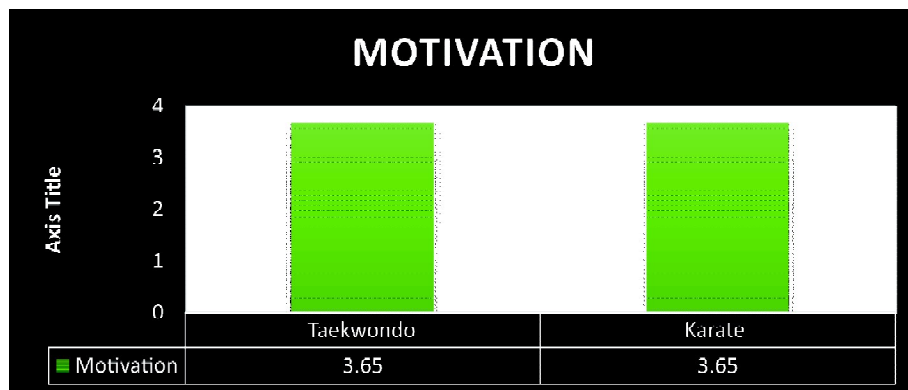


Table V  
Data and Test of Significance (T Test) for the Comparison of Taekwondo and Karate Players based Motivation

Variables	Group	N	Mean	SD	Df	T
Motivation	Taekwondo	20	3.65	1.86	38	0
	Karate	20	3.65	1.86		

From Table 5 t test showed that exist significant mean difference in the mental toughness of ( $t=0$ ). The reading is that **Motivation** scores of Taekwondo players and Karate players have same (**mean=3.65, SD=1.86**). When comparative calculated value **0** is lesser than the table value **2.021** since there was no significant difference between Taekwondo and Karate in Motivation The comparative bar diagram of the motivation level of Taekwondo and Karate players are shown in figure.

Figure V: Bar Diagram Showing that the Motivation Level of Taekwondo And Karate Players

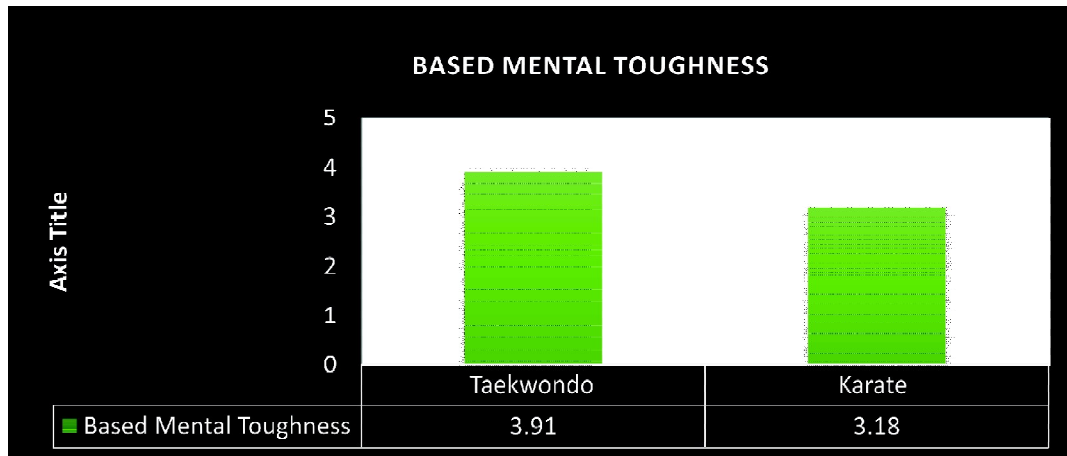


**Table VI**  
**Data and Test of Significance (T Test) for the Comparison of Taekwondo and Karate Players based Mental Toughness**

Variables	Group	N	Mean	SD	Df	T
Mental Toughness	Taekwondo	20	3.91	1.72	38	3.73*
	Karate	20	3.18	2.11		

From Table 4.6 t test showed that there exists significant mean difference in the mental toughness of ( $t= 3.73^*$ ). The inference is that **Mental toughness** scores of Taekwondo players (**mean=3.91, SD=1.72**) is higher than Karate players (**mean=3.18, SD=2.11**). When comparative calculated value 3.73\* is greater than the table value 2.021 there was difference between Taekwondo and karate in Mental toughness. The comparative bar diagram of the Mental toughness level of Taekwondo and Karate players are show in figure.

**Figure VI: Bar Diagram Showing that the Based on Mental Toughness Taekwondo and Karate Players**



## FINDINGS

Based on the objectives and hypothesis of the study, the data analysis gives the following major findings.

The inference on Rebound ability was that the scores of Taekwondo players (**mean=3.15, SD=1.08**) was higher than the Karate players (**mean=2.7, SD=1.90**).

The inference on **Ability to handle pressure** was that the scores of Taekwondo players (**mean=3.35, SD=1.39**) is higher than the Karate players (**mean=2.7, SD=2.11**).

The inference on **Concentration ability** was that the scores of Taekwondo players (**mean=4.65, SD=2.13**) is higher than the Karate players (**mean=3.2, SD=3.11**).

The inference on **Level of confidence** was that the scores of Taekwondo players (**mean=4.1, SD=1.25**) is higher than the Karate players (**mean=3.65, SD=1.71**).

The inference on **Motivation** was that scores of Taekwondo players and Karate players have same value (**mean=3.65, SD=1.86**).

T test showed that there exists significant mean difference in the mental toughness Taekwondo and Karate players (**t=3.73\***). The inference was that mental toughness scores of Taekwondo players (**mean=3.91, SD=1.72**) was higher than the Karate players (**mean=3.18, SD=2.11**).

## CONCLUSIONS

- It was observed from analysis of data that the Taekwondo players were better than the Karate players on Mental toughness.
- It was observed from analysis of data that Taekwondo players were better than the karate players on Concentration level.
- It was observed from analysis of data that there is no significance difference between Taekwondo and Karate players in Rebound ability.
- It was observed from analysis of data that there is no significance difference between Taekwondo and Karate players in Ability to handle pressure.
- It was observed from analysis of data that there is no significance difference between Taekwondo and Karate players in level of Confidence.
- It was observed from analysis of data that there is no significance difference between Taekwondo and Karate players in Motivation.

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